ExxonMobil Canada Ltd.
2019-2020 Eastern Newfoundland Offshore Exploration Drilling Project – EL 1165A and EL 1165B

EL 1165A (Hampden) Conditions Closure Report

Submitted by:

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Comment:				**Total Page Count: 40**

TABLE OF CONTENTS

ACRONYMS

Term or Abbreviation	Definition
AMAR	Autonomous Multichannel Acoustic Recorders
ADW	Approval to Drill a Well
BOP	Blow-Out Preventer
CEAA	Canadian Environmental Assessment Agency
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
CEPA	*Canadian Environmental Protection Act*
CHS	Canadian Hydrographic Service
C-NLOPB	Canada-Newfoundland and Labrador Offshore Petroleum Board
CNSOPB	Canada Nova Scotia Offshore Petroleum Board
CWC	Cold Water Coral
DFO	Fisheries and Oceans Canada
DND	Department of National Defence
ECCC	Environmental and Climate Change Canada
ECCC-CWS	Environmental and Climate Change Canada – Canada Wildlife Services
ECMP	Environmental Complicance Monitoring Plan
ESRF	Environmental Studies Research Fund
EIS	Environmental Impact Statement
EL	Exploration Licence
EMCL	ExxonMobil Canada Limited
MARPOL	International Convention for the Prevention of Pollution from Ships
MD	Measured Depth
MMO	Marine Mammal Observer
MODU	Mobile Offshore Drilling Unit
NEB	National Energy Board
NL	Newfoundland and Labrador
OA	Operations Authorization
OSP	Operations Safety Plan
OSRP	Oil Spill Response Plan
OWS	Oily Water Seperator
OWTG	Offshore Waste Treatment Guidelines
PAL	Provincial Aerospace Limited
ROV	Remote Operated Vehicle
SAR	Species at Risk
SEL	Sounds Exposure Level
SIMA	Spill Impact Mitigation Assessment
SOC’s	Synthetic on Cuttings
SMS	Safety Management System
VSP	Vertical Seismic Profiling

1 INTRODUCTION

ExxonMobil Canada Ltd. (EMCL) undertook an offshore exploration drilling program at Exploration Licences (EL) 1134 (Hampden Well) and 1135 (Harp Well - later consolidated and herein referred to as 1165A and 1165B, respectively), in the eastern portion of the Canada-Newfoundland and Labrador (NL) Offshore Area. EMCL committed to preparing a Conditions Closure Report as part of commitments in the Decision Statement, Issued under Section 54 of the *Canadian Environmental Assessment Act*, 2012 for the Eastern Newfoundland Offshore Exploration Drilling Projects. This report outlines activities undertaken by EMCL to comply with conditions set out in the Decision Statement for exploration drilling activities at EL 1165A.

2 PROJECT DESCRIPTION

EMCL conducted an exploration drilling project within offshore exploration licenses located in the Jeanne d'Arc Basin and the Flemish Pass Basin. The proposed Eastern Newfoundland Offshore Exploration Drilling Project would take place between 2019 and 2029, to determine the presence, nature and quantities of the potential hydrocarbon resource in ELs 1165A, 1165B and 1137. While an Environmental Assessment was conducted for all the potential drilling areas, EL 1137 within the Jeanne d'Arc Basin was not included in this exploration drilling program. The drilling program at 1165A well location included only the top-hole portion being completed in 2020. The drilling program at this well location may continue at a future date.

In 2016, the Canadian Environmental Assessment Agency (CEAA – herein referred to as the Agency) conducted an environmental assessment of the Designated Project in accordance with the requirements of the *Canadian Environmental Assessment Act, 2012*, and submitted its report to the Minister of Environment and Climate Change Canada. On April 17, 2019, after considering the report of the Agency on the Designated Project and the implementation of mitigation measures, a Decision Statement was released, in which the Minister determined that the Designated Project was not likely to cause significant adverse environmental effects referred to in subsection 5(1) of the *Canadian Environmental Assessment Act, 2012*.

The Hampden well was an undrilled prospect ~400 kilometres east of St John's, Newfoundland on EL1165A. The EMCL-operated Hampden K-41 exploration well was drilled by the Seadrill West Aquarius Mobile Offshore Drilling Unit (MODU) under Operations Authorization (OA) no. 24020-020-OA06 in a water depth of 1180 metres.

2.1 Project Location

Hampden K-41 is located in the southern Flemish pass, at 47° 0' 31.124" N; 46° 51' 50.595" W. in EL 1165A, which is an area of 2,661 km^2. The wellsite is located in the southeastern portion of the EL at approximately 1180m water depth. See Figure 1: Map of Well Location

2.2 Project Activities

The following table, Table 1, outlines key activities that occurred during the Hampden drilling campaign.

Table 1: Project Activities

Dates (Month, Year)	Activity	Comments
August 2018	Cold Water Coral and Sponge Survey conducted	Pre-drilling seabed survey conducted at drill centre and cuttings dispersal area to evaluate the presence and distribution of corals and sponges.
April 2019	Minister of Environment and Climate Change Canada releases Decision Statement	Honourable Catherine McKenna released Decision Statement concluding that, with the implementation of applicable conditions, the Designated Project was not likely to result in significant adverse environmental effects.
April 2020	Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) grants Approval to Drill a Well (ADW) for Hampden K-41	C-NLOPB granted an ADW to EMCL and authorized the commencement of drilling operations for the Hampden exploration well.

May, 2020	Transit to Hampden well location	Transit from Harp to Hampden location
May, 2020	Hampden spudded	Drill 711mm x 1067mm (28" x 42") Hole Section
May, 2020	711mm (28”) hole section	Drilling, casing and cementing of 711mm (28”) hole section. VSP was not required for the scope (drilling top hole portion of Hampden well).

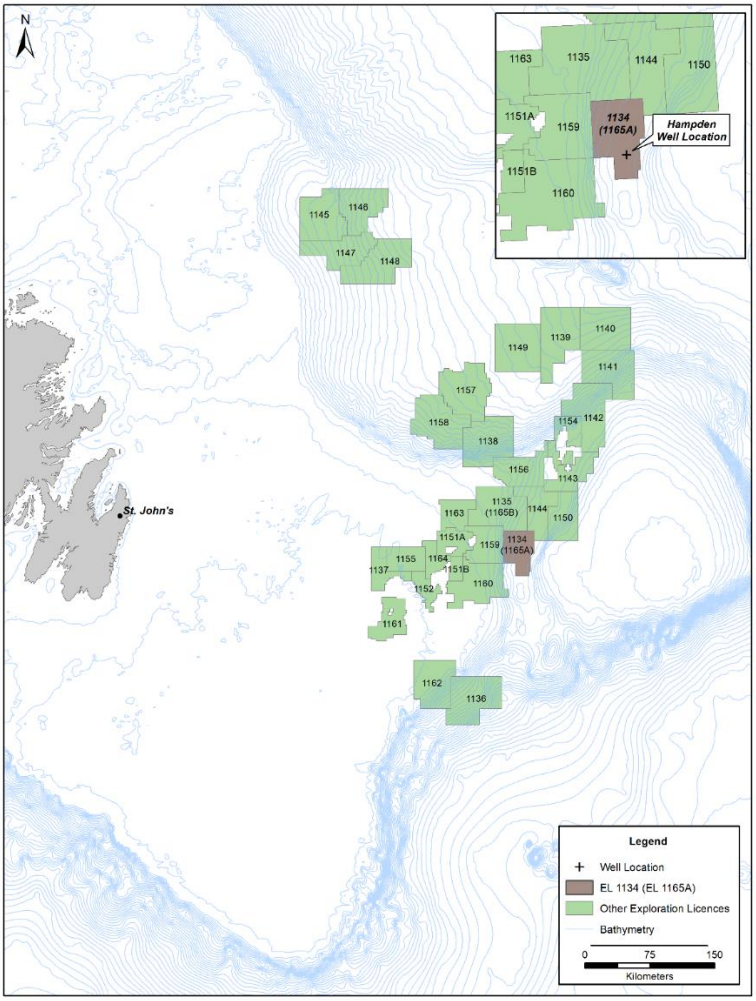

Figure 1: Map of Well Location

3 SCOPE

This report' has been prepared to fulfil Condition 2.7 and contains details of how all conditions in the Decision Statement have been met. Table 2 details how each condition was addressed by the Proponent, EMCL.

Table 2: Closure Response to Decision Statement Conditions

Cond. #	Condition	Relevant Closure Report Sections	Proponent Response
2.1	The Proponent shall ensure that its actions in meeting the conditions set out in this Decision Statement during all phases of the Designated Project are considered in a careful and precautionary manner, promote sustainable development, are informed by the best	All	EMCL has taken careful and precautionary considerations throughout all phases of the project, considered Indigenous and stakeholder knowledge and feedback and utilized recognized methods/models and best available technologies throughout the life of this exploration campaign and with regular communication and engagement with the C-NLOPB. These considerations

	information and knowledge available at the time the Proponent takes action, including community and Indigenous traditional knowledge, are based on methods and models that are recognized by standard-setting bodies, are undertaken by qualified individuals, and have applied the best available economically and technically feasible technologies.		and efforts can be seen through various components of the program and corresponding sections of this closure report.
2.2	The Proponent shall, where consultation is a requirement of a condition set out in this Decision Statement: 2.2.1 provide a written notice of the opportunity for the party or parties being consulted to present their views and information on the subject of the consultation; 2.2.2 provide sufficient information on the scope and the subject matter of the consultation in a period of time that allows the party or parties being consulted, to prepare their views and information; 2.2.3 undertake an impartial consideration of all views and information presented by the party or parties being consulted on the subject matter of the consultation; and 2.2.4 advise in a timely manner the party or parties being consulted on how the views and information received have been considered by the Proponent.	4	Indigenous and stakeholder notifications, consultation and engagement is critical to creating projects and programs in the offshore. EMCL recognizes the importance of communication and engagement with various Indigenous groups and stakeholders. The EMCL Exploration Communications Plan detailed the methods and procedures for engagement with regulatory bodies, fisheries and Indigenous groups prior to and during operations. Section 4 provides further detail on the groups with which engagement occurred as well as the timing and nature of engagement, including those actions described in Conditions 2.2.1 to 2.2.4. When consultation was a requirement of this Decision Statement, written notification of opportunity for participation was provided.
2.3	The Proponent shall, where consultation with Indigenous groups is a requirement of a condition set out in this Decision Statement, communicate with each Indigenous group with respect to the manner by which to satisfy the consultation requirements referred to in condition 2.2, including methods of notifcation, the type of information and the period of time to be provided when seeking input, the process to be used by the Proponent to undertake impartial consideration of all views and information presented on the subject of the consultation, the period of time to advise Indigenous groups of how their views and information were considered by the Proponent and the means by which Indigenous groups will be advised.	4	EMCL had been engaging with Indigenous groups on the proposed drilling program since 2017. Where consultation with Indigenous groups was required by a condition set out in the Decision Statement, appropriate engagement methods were followed according to consultation requirements referred to in condition 2.2 and 2.3.
2.4	The Proponent shall, where a follow-up program is a requirement of a condition set out in this Decision Statement,	5, 6, 7	Where a follow-up program was a requirement of the Decision Statement, EMCL provided a follow-up program

	determine the following information, for each follow-up program: 2.4.1 the methodology, location, frequency, timing and duration of monitoring associated with the follow-up program as necessary to verify the accuracy of the environmental assessment predictions as they pertain to the particular condition and to determine the effectiveness of any mitigation measure (s); 2.4.2 the scope, content and frequency of reporting of the result of the follow-up program; 2.4.3 the levels of environmental change relative to baseline conditions and predicted effects as described in the Environmental Impact Statement, that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may be required to stop Designated Project activities; and 2.4.4 the technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change have reached or exceeded the limites referred to in condition 2.4.3.		plan to the C-NLOPB which included the information required in condition 2.4.
2.5	The Proponent shall submit the information referred to in condition 2.4 prior to the implementation of each follow-up program. The Proponent shall update that information in consultation with relevant authorities during the implementation of each follow-up program, and shall provide the updated information to the Board within 30 days of the information being updated.	NA	Where follow-up programs were required, the information in condition 2.4 was submitted to the C-NLOPB prior to implementation of that program. When comments or feedback was received the plans were updated and submitted to the C-NLOPB to its satisfaction.
2.6	The Proponent shall, where a follow-up program is a requirement of a condition set out in this Decision Statement: 2.6.1 conduct the follow-up program according to the information determined pursuant to condition 2.4; 2.6.2 undertake monitoring and analysis to verify the accuracy of the	5,6,7	All follow-up programs were conducted according to the information and plans submitted with some minor exceptions, all of which were discussed with the C-NLOPB: - Only the tophole portion of the well was drilled; - VSP monitoring was not required for the scope (drilling top hole portion of the well).

	environmental assessment as it pertains to the particular condition an/or to determine the effectiveness of any mitigation measure(s); 2.6.3 determine whether modified or additional mitigation measures are required based on the monitoring and analysis undertaken pursuant to condition 2.6.2; and 2.6.4 if modified or additional mitigation measures are required pursuant to condition 2.6.3, develop and implement these mitigation measures in a timely manner and monitor them pursuant to condition 2.6.2.		- Daily seabird monitoring during the Hampden (EL 1165A) exploration program was limited to stranded seabird searches and did not include daily live bird monitoring
2.7	The Proponent shall, within 90 days of the completion of the drilling program for a single year program, or annually within 90 days of the end of each calendar year of a multi-year drilling program, submit to the Board and the Agency a report, including an executive summary of the report in both official languages. The Proponent shall document in the report: 2.7.1 the activities undertaken by the Proponent in the reporting year to comply with each of the conditions set out in this Decision Statement; 2.7.2 how the Proponent complied with condition 2.1; 2.7.3 for conditions set out in this Decision Statement for which consultation is a requirement, how the Proponent considered any views and information that the Proponent received during or as a result of the consultation; 2.7.4 the information referred to in conditions 2.47 and 2.5 for each follow-up program; 2.7.5 the results of the follow-up program requriements identified in conditions 3.12 and 4.3; and 2.7.6 any modified or additional mitigation measures implemented or proposed to be implemented by the Proponent, as determined under condition 2.6.	All	The Closure report for EL1165A was submitted on August 8, 2020. This was within 90 days of well completion on May 11, 2020. An executive summary in both official languages was posted to the internet on January 5, 2011.

2.8	The Proponent shall cause to be published on the Internet the reports and the executive summaries referred to in condition 2.7, the coral and sponge survey results referred to in condition 3.6, the communication plan referred to in condition 5.1, the well and wellhead abandonment plan referred to in condition 5.2, the well control strategies referred to in condition 6.5, the spill response plan referred to in condition 6.6, the Spill Impact Mitigation Assessment referred to in condition 6.10, the implementation schedule referred to in condition 7.1, monitoring and follow-up results for marine mammals, fish and fish habitat, and migratory birds and any update(s) or revision(s) to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall notify Indigenous groups of the availability of these documents within 48 hours of their publication.	4	All required documents were posted to the Internet at the following domain as they became available or were finalized: https://exploration.exxonmobilcanada.ca/ When the site went live, Indigenous groups were made aware of the availability of the documents and site location via written notification from EMCL's Indigenous Affairs consultant or EMCL employees. As documents were added to the website Indigenous groups were also notifed of the new additions.
2.9	When the development of a plan is a requirement of a condition set out in this Decision Statement, the Proponent shall submit the plan to the Board prior to the start of the drilling program, unless otherwise required through the condition.	All	When the development of a plan was required per the Decision Statement, it was submitted to the C-NLOPB prior to drilling unless otherwise required through the condition and as specified in the implementation schedule reviewed with the C-NLOPB monthly.
2.10	The Proponent shall notify the Agency and Indigenous groups in writing no later than 60 days after the day on which there is a change of operator for the Designated Project.	4	There was no change of operator for the Designated Project.
2.11	The Proponent shall consult with Indigenous groups prior to initiating any material changes to the Designated Project that may result in adverse environmental effects, and shall notify the Board and the Agency in writing no later than 60 days prior to initiating the change(s).	4	No material changes that may have resulted in adverse environmental effects were made during the program.
2.12	In notifying the Board and the Agency pursuant to condition 2.11, the Proponent shall provide the Board and the Agency with a description of the potential adverse environmental effects of the change(s) to the Designated Project, the proposed mitigation measures and follow-up requirements to be implemented by the Proponent and the results of consultation with Indigenous groups.	4	No material changes that may have resulted in adverse environmental effects were made during the program.

3.1	The Proponent shall treat all discharges from offshore drilling ínto the marine environment which, at a minimum, will meet the volumes and concentration limits identified in the Offshore Waste Treatment Guidelines, issued jointly by the National Energy Board, the Canada-Newfoundland and Labrador Offshore Petroleum Board, the Canada-Nova Scotia Offshore Petroleum Board, and any other legislative requirements, where applicable.	5.4	Sampling, analysis and reporting requirements for regulated waste streams were outlined in the EMCL Environmental Compliance Monitoring plan (as submitted Dec 2, 2018). A robust process was developed to ensure that discharges overboard met the requirements of subsection 9(i)(j) of the *Newfoundland Offshore Drilling and Production Regulations*. Section 5.4 below provides additional clarity on how this expectation was met.
3.2	The Proponent shall dispose of spent or excess synthetic-based drilling muds that are not re-used at an approved on-shore facility.	5.2	No synthetic-based drilling muds were used during the Hampden drilling program.
3.3	The Proponent shall apply, at a minimum, the standards identified in the Offshore Chemical Selection Guidelines for Drilling & Production Activities on Frontier Lands, issued jointly by the National Energy Board, the Canada-Newfoundland and Labrador Offshore Petroleum Board and the Canada-Nova Scotia Offshore Petroleum Board, to select lower toxicity chemicals for use and discharge into the marine environment, including drilling fluid constituents, and shall submit any necessary risk justification pursuant to the Guidelines to the Board for acceptance prior to use.	5.4	All fluids intended for release to sea were managed in accordance with the C-NLOPB *Guidelines Respecting the Selection of Chemicals Intended to be used in Conjunction with Offshore Drilling & Production Activities on Frontier Lands*. Chemicals were approved through the EMCL Agent Master process. See section 5.4 for additional information.
3.4	The Proponent shall treat all discharges from supply vessels into the marine environment in accordance with the International Maritime Organization's International Convention for the Prevention of Pollution from Ships and any other legislative requirements, where applicable.	5.4	All supply vessels followed the International Convention for the Prevention of Pollution from Ships (MARPOL) which outlines all discharge requirements. See section 5.4 for additional information.
3.5	The Proponent shall conduct a pre-drill survey with qualified individual(s) at each well site to confirm the presence or absence of any unexploded ordnance or other seabed hazards. If any such ordnance or seabed hazard is detected, it shall not be disturbed and the Proponent shall contact the Canadian Coast Guard's Joint Rescue Coordination Centre in Halifax and the Board to determine an appropriate course of action, prior to commencing drilling.	NA	Canadian Hydrographic Service (CHS), Department of National Defence (DND) and Fugro databases were reviewed for indicators of shipwrecks, munitions, cables or other anthropogenic objects on the seafloor within the Hampden K-41 hazards surveys area. None were found and all required information was submitted to C-NLOPB as required by the geoscience team.
3.6	The Proponent shall develop and conduct, in consultation with Fisheries	5.1	A pre-drilling coral and sponge survey was developed prior to conducting the program in consultation with DFO

	and Oceans Canada and the Board, a coral and sponge survey, using remote operated vehicles guided by a qualified individual, to confirm the presence or absence of any aggregations of habitat-forming corals or sponges or any other environmentally sensitive features. Survey transect length and pattern around wellsite's shall be based on applicable drill cutting dispersion model results. Transects around anchor sites should extend at least 50 metres from the extent of the anchor pattern.		and C-NLOPB. The surveys were conducted via ROV in August 2018. EMCL contracted RPS Canada Ltd and Wood Int. to provide biological support for the survey, which was conducted using the Paul.A.Sacuta, a support vessel owned and operated by Atlantic Towing. Section 5.1 details the survey methodology and findings.
3.7	If the survey(s) conducted in accordance with condition 3.6 confirm(s) the presence of aggregations of habitat-forming corals or sponges, or if other environmentally sensitive features are identified by a qualified individual, the Proponent shall change the location of the well on the seafloor or redirect drill cuttings discharges to avoid affecting the aggregations of habitat-forming corals or sponges, unless not technically feasible, as determined in consultation with the Board. If not technically feasible, the Proponent shall consult with the Board and Fisheries and Oceans Canada prior to commencing drilling to determine an appropriate course of action, subject to the approval of the Board, including any additional mitigation measures.	5.1	As a result of the pre-drill survey, it was determined that there were two C-NLOPB defined coral colonies observed within the 200 m by 200 m boundary. The drill centre location was selected to ensure the colonies were avoided and therefore, drilling proceeded at the site in the spring of 2020 (May).
3.8	The Proponent shall apply Fisheries and Oceans Canada's *Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound in the Marine Environment* during the planning and conduct of vertical seismic surveys. In doing so, the Proponent shall establish a safety zone of a minimum radius of 500 metre from the seismic sound source.	NA	No vertical seismic surveys were conducted during this exploration program. Based on the scope of the program VSP was not required.
3.9	The Proponent shall develop, in consultation with Fisheries and Oceans Canada and the Board, a marine mammal monitoring plan that shall be submitted to the Board at least 30 days prior to the commencement of any vertical seismic survey. The Proponent shall implement the plan during the conduct of vertical seismic surveys. As part of the plan, the Proponent shall: 3.9.1 develop and implement marine mammal observation requirements, including the use of passive acoustic	NA	No vertical seismic surveys were conducted during this exploration program. Based on the scope of the program VSP was not required.

	monitoring, or equivalent technology, and visual monitoring by marine mammal observers throughout vertical seismic surveys; 3.9.2 ensure that observation requirements specify the requirement for shut down of the seismic sound source if any marine mammal or sea turtle is observed within the 500 metre safety zone; and 3.9.3 submit the results of the activities undertaken as part of the marine mammal observation requirements to the Board within 60 days of the end of the vertical seismic surveys.		
3.10	The Proponent shall implement measures to prevent or reduce the risks of collisions between supply vessels and marine mammals and sea turtles, including: 3.10.1 requiring supply vessels to use established shipping lanes, where they exist; and 3.10.2 requiring supply vessels to reduce speed to a maximum of 7 knots when a marine mammal or sea turtle is observed or reported within 400 metres of a supply vessel, except if not feasible for safety reasons.	N/A	Marine traffic follows traditional routes during trans atlantic voyages based on final destination, there are no established shipping lanes to or near the exploration area, and therefore supply vessels were not required to follow established shipping lanes during this campaign. Requirements for reduced speeds were communicated to vessel operators, who then communicated requirements to all captains of vessels under contract for this exploration scope. Supply vessels were required to reduce speed to a max. of 7 knots when a marine mammal or sea turtle was observed or reported within 400m of the supply vessel. During this program there were no reported sightings of marine mammals within 400m of a supply vessel.
3.11	The Proponent shall report any collisions of a supply vessel with marine mammals or sea turtles to the Board, Fisheries and Oceans Canada's Canadian Coast Guard Regional Operations Centre, any other relevant authorities as soon as reasonably practicable but no later than 24 hours following the collision, and notify Indigenous groups within three days.	NA	No collisions of supply vessels with marine mammals or sea turtles occurred during this exploration program.
3.12	The Proponent shall develop and implement follow-up requirements, pursuant to condition 2.4, to verify the accuracy of the predictions made during the environmental assessment as it pertains to fish and fish habitat, including marine mammals and sea turtles, and to determine the effectiveness of mitigation measures identified under conditions 3.1 to 3.11. As part of these follow-up requirements, for the duration of the drilling program, the Proponent shall:	5	A pre-drill coral and sponge survey program was developed in consultation with the various regulatory bodies. The survey was conducted around the well head prior to the start of drilling. The pre-drill survey also included the identification and cataloging of any benthic fauna encountered. The post drilling cuttings survey collected benthic video imagery over the 200 m x 200 m area around the wellhead at 6m transect spacing. The post-drill survey evaluated the extent and thickness

	3.12.1 for every well, measure the concentration of synthetic-based drilling fluids retained on discharged drill cuttings as described in the Offshore Waste Treatment Guidelines to verify that the discharge meets, at a minimum, the performance targets set out in the Guidelines and any applicable legislative requirements and report the results to the Board; 3.12.2 for the first well in each exploration license, and for any well where drilling is undertaken in an area determined by coral and sponge surveys to be sensitive benthic habitat, and for any well located within a special area designated as such due to the presence of sensitive coral and sponge species, or a location near a special area where drill cuttings dispersion modelling predicts that drill cuttings deposition may have adverse effects, develop and implement, in consultation with Fisheries and Oceans Canada and the Board, follow-up requirements to verify the accuracy of the environmental assessment and effectiveness of mitigation measures as they pertain to the effects of cuttings discharges on benthic habitat. Follow-up shall include: 3.12.2.1 measurement of sediment depostition extent and thickness post-drilling to verify the drill waste deposition modeling predictions; 3.12.2.2 benthic fauna surveys to verify the effects of mitigation measures; and 3.12.2.3 The Proponent shall report the information collected, as identified in conditions 3.12.2.1 and 3.12.2.2, including a comparison of modelling results to *in situ* results, to the Board within 60 days following the drilling of the first well in each exploration license; and 3.12.3 for the first well in each exploration license, develop and implement, in consultation with Fisheries and Oceans Canada and the Board, follow-up requirements to verify the accuracy of the environmental assessment as it pertains to underwater noise levels. As part of the development of these follow-up		of sediment via visual analysis of the drill cuttings the extent of which was further quantified and supplemented by depth penetration measurements and sediment cores. *EL 1165A Drilling Discharges Follow-Up Program: Drill Cuttings Measurements And Monitoring 2020 Report* (Wood, 2020) and *EL 1165A Drilling Discharges Follow-Up Program: Benthic Habitat Monitoring 2020 Reports (Wood, 2020)* were submitted to the the regulatory agancies withing 60 days and verified the predicted modelling results. An extensive acoustic monitoring program was developed in consultation with Fisheries and Oceans Canada (DFO) and C-NLOPB. Acoustic receivers were deployed prior to the commencement of the drilling program to establish baseline sound scape conditions in the area. An acoustic monitoring report, *ExxonMobil Canada Ltd Flemish Pass Exploratory Drilling Operations Soundscape Characterization, Marine Mammal Occurrence, and Potential Effects of Underwater Noise Emissions on Cetaceans (Jasco, 2020),* was submitted to the C-NLOPB on November 16, 2020.

	requirements, the Proponent shall determine how underwater noise levels shall be monitored through field measurement by the Proponent during the drilling program and shall provide that information to the Board prior to the start of the drilling program.		
3.13	The Proponent shall submit to the Board a letter, prior to drilling, confirming its intent to participate in research pertaining to the presence of Atlantic salmon (Salmo salar) in the Jeanne d'Arc Basin and the Flemish Pass and update the Board and Indigenous groups annually on related research activities.	4.5	A letter was submitted to the C-NLOPB on August 9th, 2019 detailing the activities related to salmon research. For more information see section 4.5.
4.1	The Proponent shall carry out the Designated Project in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall be in compliance, where applicable, with the *Migratory Birds Convention Act, 1994,* the *Migratory Birds Regulations* and with the *Species at Risk Act* and shall take into account Environment and Climate Change Canada's *Avoidance Guidelines.*	7	After consultation with Environment and Climate Change Canada (ECCC) a seabird handling permit was issued, along with associated protocols for seabird handling, avoidance and release, which were distributed to the MODU and support vessels along with the permit. In addition, a follow-up monitoring program was developed in consultation with C-NLOPB and Environment and Climate Change Canada – Canada Wildlife Services (ECCC -CWS) to verify the accuracy of the predictions made during the environmental assessment as it pertains to migratory birds and to determine the effectiveness of the mitigation measures implemented.
4.2	The Proponent shall implement measures to avoid harming, killing or disturbing migratory birds, including: 4.2.1 using formation testing while tripping, or similar technology, rather than formation testing with flaring, where acceptable by the Board; 4.2.2 limiting flaring to the length of time required to characterize the wells' hydrocarbon potential and as necessary for the safety of the operation; 4.2.3 flaring as early as practicable during daylight hours to limit flaring that occurs during nighttime; 4.2.4 operating a water curtain barrier around the flare during flaring; 4.2.5 notifying the Board at least 30 days in advance of planned flaring to determine whether the flaring would occur during a period of migratory bird vulnerability and to determine how the Proponent plans to avoid adverse environmental effects on migratory birds;	7	No flaring operations were required during the exploration program. Vessels were required to maintain a minimum lateral distance of 300 metres from Cape St. Francis and Witless Bay Islands Important Bird and Biodiveristy Areas. Supply helicopters were required to fly above 300 metres altitude from active bird colonies and a lateral distance of 1000 metres from the above areas except for approach, take-off and landing or if not feasible for safety reasons.

	4.2.6 requiring supply and other support vessels to maintain a minimum lateral distance of 300 metres from Cape St. Francis and Witless Bay Islands Important Bird and Biodiversity Areas, unless there is an emergency situation; and 4.2.7 requiring supply helicopters to fly at altitudes greater than 300 metres above sea level from active bird colonies and at a literal distance of 1000 metres from Cape St. Francis and Witless Bay Islands Important Bird and Biodiversity Areas except for approach, take-off and landing maneuvers, as required under the *Canadian Civil Aviation Regulations,* or if not feasible for safety reasons.		
4.3	The Proponent shall develop, prior to the start of the drilling program and in consultation with Environment and Climate Change Canada, and the Board, follow-up requirements, pursuant to condition 2.4, to verify the accuracy of the environmental assessment as it pertains to migratory birds and to determine the effectiveness of the mitigation measures implemented by the Proponent to avoid harm to migratory birds, their eggs and nests, including the mitigation measures used to comply with conditions 4.1 to 4.3. The Proponent shall implement these follow-up requirements for the duration of the drilling program. As part of the follow up, the Proponent shall: 4.3.1 monitor daily for the presence of marine birds from the drilling installation using a trained observer following Environment and Climate Change Canada's Eastern Canada Seabirds at Sea Standardized Protocol for Pelagic Seabird Surveys from Moving and Stationary Platforms; and 4.3.2 monitor the drilling installation and supply vessels daily for the presence of stranded birds and follow Environment and Climate Change Canada's Procedures for Handling and Documenting Stranded Birds Encountered on Infrastructure Offshore Atlantic Canada.	7	As per condition 4.3 of the Decision Statement, EMCL developed a Migratory Birds follow-up monitoring program, in consultation with C-NLOPB and ECCC-CWS, to verify the accuracy of the predictions made during the environmental assessment as it pertains to migratory birds and to determine the effectiveness of the mitigation measures implemented. Both the MODU and supply vessels were monitored daily for the presence of stranded marine birds, following following ECCC's *Procedures for Handling and Documenting Stranded Birds Encountered on Infrastructure Offshore Atlantic Canada*.

5.1	The Proponent shall develop and implement a Fisheries Communication Plan in consultation with the Board, Indigenous groups and commercial fishers. The Proponent shall develop the Fisheries Communications Plan prior to the drilling and implement it for the duration of the drilling program. The Proponent shall include in the Fisheries Communication Plan: 5.1.1 procedures to notify Indigenous groups and commercial fishers of planned drilling activity, a minimum of two weeks prior to the start of drilling of each well; 5.1.2 procedures to determine the requirement for a Fisheries Liaison Officer and/ or fisheries guide vessel during drilling installation movement and geophysical programs; 5.1.3 procedures to communicate with Indigenous groups and commercial fishers, in the event of an accident or malfunction, the results of the monitoring and any associated potential health risks referred to in condition 6.9; and 5.1.4 the type of information that will be communicated to Indigenous groups and commercial fishers, and the timing of distribution of this information, that will include but not be limited to: 5.1.4.1 a description of planned Designated Project activities; 5.1.4.2 location(s) of safety exclusion zones; 5.1.4.3 anticipated vessel traffic schedule; 5.1.4.4 anticipated vessel routes; and 5.1.4.5 locations of suspended or abandoned wellheads.	4	A Fisheries Communication Plan and Indigenous Fisheries Communications Plan were developed to meet the requirement of this condition. They were reviewed with the C-NLOPB, Indigenous groups and commercial fishers. Per the plan, Indigenous groups and commercial fishers were notified a minimum of two weeks prior to the drilling of each well. Commercial fishers were consulted to determine if a Fisheries Liaison Officer should be onboard during specific operations. No accidents or malfunctions occurred during the exploration program. Monthly notifications went out to Indigenous groups and commercial fisheries including project activities, location of safety exclusions zones, vessel information and locations of suspended or abandoned wellheads.
5.2	The Proponent shall develop and implement a well and wellhead abandonment plan and submit to the Board for acceptance at least 30 days prior to abandonment of each well. If the Proponent proposes to abandon a wellhead on the seafloor in a manner that may interfere with Indigenous or commercial fisheries, the Proponent shall develop the wellhead abandonment strategy in consultation with commercial fishers and potentially affected	NA	The well and wellhead abandonment plan was developed and submitted as part of the OA documents package in December 2, 2018. The plan overview was also posted on the Internet. The wellhead was not proposed to be abandoned in a way that would interfere with fisheries.

	Indigenous groups with fishing licenses that overlap with the Designated Project Area, identified in consultation with Fisheries and Oceans Canada.		
5.3	The Proponent shall provide the details of its operation, including the safety exclusion zones during drilling and testing, and the location information of abandoned wellheads if left on the seafloor, to the Marine Communications and Traffic Services for broadcasting and publishing the Notices to Shipping, to the North Atlantic Fisheries Organization Secretariat, and to the Canadian Hydrographic Services for future nautical charts and planning.	NA	A communication detailing location of abandoned wellheads associated with the Designated Project was sent on July 6, 2020 to commercial fishers, Indigenous groups and other stakeholders per condition 5.3.
5.4	The Proponent shall report annually to the Board on known incidents of lost or damaged fishing gear attributed to the Designated Project.	NA	No known incidents of lost or damaged fishing gear were attributed to this exploration program.
6.1	The Proponent shall take all reasonable measures to prevent accidents and malfunctions that may result in adverse environmental effects and shall implement emergency response procedures and contingency plans developed in relation to the Designated Project in the event of an accident or malfunction. This shall include the development and implementation of operating procedures including thresholds for cessation of a work activity, with respect to meteorological and oceangraphic conditions experienced at the project location, and which reflect the facility's design limits and limits at which any work or activity may be conducted safely and without causing adverse environmental effects. These conditions include poor weather, high sea states, and presence of sea ice or icebergs.	8	Details regarding accident and malfunction prevention measures were included in the Emergency Response Plan, Oil Spill Response Plan (OSRP), Severe Weather Plan, Collision Avoidance Plan, Helicopter Operations Plan, Ice Management Plan, Marine Operations Plan and Operations Safety Plan (OSP) as submitted to the C-NLOPB on December 2, 2018. Revisions to the OSRP and Operations Safety Plan were also subsequently submitted to the C-NLOPB. See Section 8 for more information.
6.2	The Proponent shall develop, in consultation with the Board and Environment and Climate Change Canada, and implement for the duration of the drilling program, a physical environment monitoring program, in accordance with the *Newfoundland Offshore Petroleum Drilling and Production Regulations* that meets or exceeds the requirement of the *Offshore Physical Environmental Guidelines*	NA	Details on the physical monitoring program were included in the EMCL Collision Avoidance Plan, EMCL Helicopter Operations Plan, and Metocean Monitoring Plan which were submitted to the C-NLOPB as part of the Operation Authorization on December 2, 2018. The physical environment monitoring program report was submitted to the C-NLOPB on August 8, 2020.

	(September 2008). The physical environment monitoring program shall be submitted to the Board for approval prior to commencing drilling.		
6.3	The Proponent shall prepare a plan for avoidance of drilling installation collisions with vessels and other hazards that may reasonably be expected in the Designated Project Area and submit the plan to the Board for acceptance prior to drilling.	NA	Details regarding collision avoidance were included in the EMCL Exploration Collision Avoidance Plan which was submitted to the C-NLOPB as part of the OA application on December 2, 2018.
6.4	The Proponent shall prepare an Ice Management Plan that will include measures for avoidance of collisions with icebergs and submit the plan to the Board for acceptance prior to drilling	8.2	An Ice Management Plan was developed and submitted to the C-NLOPB as a part of the OA application. See section 8.2 for additional information.
6.5	The Proponent shall prepare and submit to the Board well control strategies that include: 6.5.1 - measures for well control and containment and the drilling of a relief well, as well as options to reduce overall response timeline; and 6.5.2 - measures to quickly disconnect the marine drilling riser from the well in the event of an emergency or extreme weather conditions.	8.1	Measures for well control & containment, relief wells and quick disconnect in the event of emergency or weather were included in the EMCL Well Intervention Plan and the Well Control Plan which were submitted to the C-NLOPB as part of the OA on December 2, 2018.
6.6	After considering the views of Indigenous groups, the Proponent shall prepare and submit a Spill Response Plan to the Board for acceptance prior to drilling. The Spill Response Plan will include the following: 6.6.1 - procedures to respond to and mitigate the potential environmental effects of a spill of any substance that may cause adverse environmental effects, including spill containment and recovery procedures; 6.6.2 - reporting thresholds and notification procedures; 6.6.3 - measures for wildlife response, protection and rehabilitation including procedures for the collection and cleaning of marine mammals, migratory birds, sea turtles and species at risk, and measures for shoreline protection and clean-up; and 6.6.4 - roles and responsibilities for offshore operations and onshore responders.	8.1	During the environmental assessment process, EMCL met with various Indigenous groups and discussed spill prevention, including spill response tactics. The final EMCL Exploration OSRP was submitted to the C-NLOPB on August 9, 2019 and was posted to the Exploration website as required. Included in this plan were procedures and measures related to spill containment/recovery, reporting and notification, wildlife response/protection/rehabilitation, and roles and responsibilities for onshore and offshore responders.
6.7	The Proponent shall conduct an exercise of the Spill Response Plan prior to drilling	8.1	A spill response tabletop exercise was conducted on July 16, 2019. The results of this exercise and associated

	activities as recommended in the Newfoundland Offshore Drilling and Production Guidelines, document any deficiencies observed during this exercise and provide to the Board for review, and adjust the plan to the satisfaction of the Board to address any deficiencies identified during the exercise.		actions were provided to the C-NLOPB on July 31, 2019 and Indigenous groups on August 16, 2019.
6.8	The Proponent shall review the Spill Response Plan prior to the drilling of each well to verify that it continues to be appropriate and shall update the plan as necessary and in a manner acceptable to the Board.	8.1	An OSRP was included in the OA application package, with an updated OSRP submitted to the C-NLOPB on August 9th, 2019. The OSRP was reviewed again in full prior to commencement of drilling at EL 1165A.
6.9	In the event of a spill or unplanned release of oil or any other substance that may cause adverse environmental effects, the Proponent shall notify the Board and any other relevant authorities as soon as possible and implement its Spill Response Plan, including procedures for notification of Indigenous groups and commercial fishers. As required by and in consultation with the Board, this may include monitoring the environmental effects of a spill on components of the marine environment until specific endpoints identified in consultation with relevant authorities are achieved. As applicable, this may include: 6.9.1 - sensory testing of seafood for taint, and chemical analysis for oil concentrations and any other contaminants, as applicable; 6.9.2 - measuring levels of contamination in recreational and commercial fish species with results integrated into a human health risk assessment to determine the fishing area closure status 6.9.3 - monitoring for marine mammals, sea turtles and birds for visible signs of contamination or oiling and reporting results to the Board; and 6.9.4 - monitoring benthic organisms and habitats in the event of a spill or other event that could result in smothering or localized effects to the benthic environment.	8.1	Throughout the duration of the Hampden well, there were no accidents or malfunctions that required activation of the Spill Response Plan.

6.10	The Proponent shall undertake a Spill Impact Mitigation Assessment to identify spill response options that will be implemented in the case of a spill to provide for the best opportunities to minimize environmental consequences, and provide it to the Board for review prior to drilling.	8.1	A draft Spill Impact Mitigation Assessment (SIMA) was prepared for EMCL by LGL Ltd and was submitted to the C-NLOPB on April 30, 2019. The SIMA was part of the contingency planning process for exploratory drilling in the Flemish Pass. The SIMA was a tool to help evaluate scientific, policy and stakeholder inputs to arrive at reasoned decisions as to which response tool(s) should be used under a particular set of circumstances, with the goal of minimizing overall harm once a spill has occurred. Following submission of the draft SIMA, a meeting was held with the C-NLOPB and National Environmental Emergencies Centre's Environmental Emergencies Science Table (the "Science Table") to review the draft. Participants included representatives from Fisheries and Oceans Canada, Environment and Climate Change Canada, Canadian Wildlife Service, Canadian Coast Guard, Transport Canada, and Natural Resources Canada. Comments were provided to EMCL and incorporated prior to submission of the final SIMA on August 19, 2019 and was posted on the EMCL Exploration website.
6.11	The Proponent shall provide Indigenous groups with the results of the exercise conducted pursuant to condition 6.7, following its review by the Board. The Proponent shall provide the final Spill Response Plan to Indigenous groups prior to drilling and any updates to the Spill Response Plan pursuant to condition 6.8.	8.1, 4	Exercise results were provided to Indigenous groups on August 16, 2019 and the Spill Response Plan was posted to the Internet with a link shared to groups the week of September 3, 2019.
6.12	In the event of a sub-sea well blowout, the Proponent shall begin the immediate mobilization of subsea containment and capping equipment to the blowout location. Simultaneously, the Proponent shall commence mobilization of a relief well drilling installation.	NA	Prior to commencement of drilling, as part of the OA application submitted to the C-NLOPB, EMCL prepared a Well Intervention Plan which outlined the procedure for initiation, mobilization and deployment of a primary capping stack and back-up capping stack, if required. During the 2019-2020 EMCL Exploration campaign on leases EL1165A and EL1165B, no sub-sea well blowouts occurred.
6.13	In the event of an accident or malfunction, the Proponent shall comply with the requirements of the *Accord Acts* and the *Canada-Newfoundland and Labrador Offshore Financial Requirement Regulations* and the requirements	NA	During the 2019-2020 EMCL Exploration campaign on leases EL1165A and EL1165B, no accidents or malfunctions occurred. In the event of an accident or malfunction the proponent had sufficient processes in place to ensure compliance with the requirements of the *Accord Acts and the Canada-Newfoundland and Labrador*

	described in the Compensation *Guidelines Respecting Damages to Offshore Petroleum Activity.*		*Offshore Financial Requirement Regulations* and the requirements described in the *Compensation Guidelines Respecting Damages to Offshore Petroleum Activity*.
6.14	The Proponent shall report annually to the Board on the effectiveness of operating procedures and cessation of a work or activity thresholds, established for operating in poor weather, high sea state, and sea ice or iceberg conditions.	NA	The physical environment report was submitted on August 8, 2020).
7.1	The Proponent shall submit to the Board a schedule for each condition set out in this Decision Statement at least 30 days prior to the start of a drilling program. This schedule shall detail all activities planned to fulfill each condition set out in this Decision Statement and the commencement and estimated completion month(s) and year(s) for each of these activities.	NA	The implementation schedules referred to in Condition 7.1 were submitted to the C-NLOPB, posted online and updated approximately monthly from the first submission in June 2019 until program completion in May 2020.
7.2	The Proponent shall submit to the Board a schedule outlining all activities required to carry out all phases of the Designated Project no later than 30 days prior to the start of the drilling program. The schedule shall indicate the commencement and estimated completion month(s) and year(s) and duration of each of these activities.	2.2	The activities schedule was prepared and submitted with OA document submission in 2019. For a list of activities and schedule see Section 2.2 of this closure report.
7.3	The Proponent shall submit to the Board in writing an update to schedules referred to in conditions 7.1 and 7.2 every year no later than June 30, until completion of all activities referred to in each schedule.	NA	The implementation schedules referred to in Condition 7.1 were submitted to the C-NLOPB, posted online and updated approximately monthly from the first submission in July 2019 until program completion in May 2020. The activities schedule was prepared and submitted with OA document submission in 2019.
7.4	The Proponent shall provide to the Board revised schedules if any change is made to the initial schedules referred to in condition 7.1 and 7.2 or to any subsequent update(s) referred to in condition 7.3, upon revision of the schedules.	NA	The implementation schedules referred to in Condition 7.1 were submitted to the C-NLOPB, posted online and updated approximately monthly from the first submission in July 2019 until program completion in May 2020. The activities schedule was prepared and submitted with OA document submission in August 2019. Changes to schedules were communicated to the C-NLOPB during regular monthly meetings and followed up with written e-mail notifications and/or posting updated schedules when required.
8.1	The Proponent shall maintain all records required to demonstrate compliance with the conditions set out in this Decision Statement. The Proponent shall provide the aforementioned records to the Board or the Agency upon demand within a timeframe specified by the Board or Agency.	NA	EMCL retains all records required to demonstrate compliance with this Decision Statement and was provided to the C-NLOPB as required.

8.2	The Proponent shall retain all records referred to in condition 8.1 at a facility in Canada. The records shall be retained and made available for a minimum of five years after completion of the Designated Project, unless otherwise specified by the Board. The Proponent shall inform the Board of the location of the facility where records are retained and notify the Board and the Agency at least 30 days prior to any change to the location of the facility.	NA	EMCL retains all records required to demonstrate compliance with this Decision Statement and utilizes document control practices to ensure adequate retention standards.
8.3	The Proponent shall notify the Board and the Agency of any change to the contact information of the Proponent included in the Decision Statement.	NA	EMCL remained in contact with the C-NLOPB throughout the duration of the exploration program and notified them of any changes to personnel/ contacts as needed.

4 COMMUNICATIONS AND CONSULTATION

4.1 Communications Plan

The final EMCL Exploration Fisheries Communication Plan was submitted to the C-NLOPB on August 28, 2019. This plan was developed in consideration of Condition 5.1 and in consultation with the C-NLOPB, Indigenous groups and commercial fishers. Details regarding the consultation on this and other plans can be found in section 4.4. In addition, an Indigenous Fisheries Communication Plan was created with other operators in the region to outline procedures for engagement with Indigenous groups and was submitted June 28 2019.

Both the EMCL Exploration Fisheries Communication Plan and Indigenous Fisheries Communications Plan included a list of contacts, a description of how information is shared with fishers and Indigenous groups, and a list of the type of information that is shared.

4.2 Monthly Notifications

Both section 5.1 of the Fisheries Communication Plan (titled '*Communication During Operations*') and the section titled " Communications During Operations" in the Indigenous Fisheries Communications Plan specify that beginning two weeks prior to drilling commencement and monthly thereafter, operational updates will be emailed to identified Indigenous groups and fisheries contacts.

Table 3 indicates the date and general contents of each of the e-mailed updates.

Table 3: Indigenous Groups and Fisheries Updates

Title	Date	Contents
Fisheries Update 1	11-Sep-19	Notification of website and documents posted
Fisheries Update 2	28-Sep-19	Operational Update
Fisheries Update 3	31-Oct-19	Operational Update
Fisheries Update 4	30-Nov-19	Operational Update
Fisheries Update 5	31-Dec-19	Operational Update
Fisheries Update 6	31-Jan-20	Operational Update

Fisheries Update 7	29-Feb-20	Operational Update
Fisheries Update 8	13-Mar-20	Operational Update
Fisheries Update 9	6-Apr-20	Operational Update
Fisheries Update 10	10-May-20	Operational Update
Fisheries Update 11	1-Jun-20	Operational Update, Final communication
Fisheries Update 12	6-Jul-20	Communication to provide locations of abandoned wellheads

4.3 Internet Site

The EMCL Exploration site went live on August 27, 2019. The following documents were posted to the Internet and email notification was sent to Indigenous groups on September 11, 2019:

- Reports and the executive summaries referred to in condition 2.7,
- Coral and sponge survey results referred to in condition 3.6,
- Communication plan referred to in condition 5.1,
- Well and wellhead abandonment plan referred to in condition 5.2,
- Well control strategies referred to in condition 6.5,
- Spill response plan referred to in condition 6.6,
- Spill Impact Mitigation Assessment referred to in condition 6.10,
- Implementation schedule referred to in condition 7.1.

Additional documents and the final report will be posted once finalized and available.

4.4 Engagement and Consultation

Table 4: List of Engagements and Consultations

#	CEAA Condition #:	Decision Statement Reference:	Date:	Group:	Record of Engagement/Consultation:
1	3.6	The Proponent shall develop and conduct, in consultation with Fisheries and Oceans Canada and the Board, a coral and sponge survey to confirm the presence or absence of any aggregations of habitat-forming corals or sponges or any other environmentally sensitive features. The equipment used to conduct the surveys shall be operated by a qualified individual. Survey transect length and pattern around well sites shall be based on applicable drill cutting dispersion model results. Transects around anchor sites should extend at least 50 metres from the extent of the anchor pattern.	13-Jun-18	DFO, C-NLOPB, CEAA	Presented the methodology for the cold water coral and sponge survey
			15-Jun-18	C-NLOPB, DFO	Emailed the CWC methodology
			6-Jun-19	C-NLOPB, DFO	Submitted the 2019 Environmental Program Application, which included the scope of work for the Phase Two Site Investigation - Coral and Sponge Survey, as the final anchor pattern for EL 1165A has been finalized
2	3.7	If the survey(s) conducted in accordance with condition 3.6 confirm(s) the presence of aggregations of habitat-forming corals	16-Apr-18	C-NLOPB, DFO	Draft Marine Environmental Risk Assessment for EL 1165A & EL 1165A submitted

		or sponges, or if other environmentally sensitive features are identified by a qualified individual, the Proponent shall change the location of the well on the seafloor or redirect drill cuttings discharges to avoid affecting the aggregations of habitat-forming corals or sponges, unless not technically feasible, as determined in consultation with the Board. If not technically feasible, the Proponent shall consult with the Board and Fisheries and Oceans Canada prior to commencing drilling to determine an appropriate course of action, subject to the approval of the Board, including any additional mitigation measures.	19-Apr-19	C-NLOPB	Comments on the Environmental Risk Assessment for EL 1165A received. Incorporated the comments into the plan which included updates to the following sections: - Introduction - Miscellaneous figures throughout the document - Section 3.0, Section 4.0, Section 5.0, Section 6.0, and Section 8.0 - Conclusion
			29-Apr-19	DFO	Comments on the Environmental Risk Assessment for EL 1165A received. Incorporated the comments into the plan which included updates to the following sections: - Executive Summary - Survey Results - Miscellaneous figures throughout the document - Risk Assessment Summary - Conclusion
			9-Aug-19	C-NLOPB, DFO	Draft Phase Two - Marine Environmental Risk Assessment EL 1165A re-submitted (combined 2018 and 2019 results) Updates included the following: - Executive summary - Section 3.2 - Section 4.0 to 4.2 - Section 4.4 - General (update to overall document to include 2019 information as required) - Miscellaneous figures throughout the document
3	3.9	The Proponent shall develop, in consultation with Fisheries and Oceans Canada and the Board, a marine mammal monitoring plan that shall be submitted to the Board at least 30 days prior to the commencement of any vertical seismic survey. The Proponent shall implement the plan during the conduct of vertical seismic surveys.	11-Oct-19	C-NLOPB, DFO	After consultation with the required regulatory bodies a Marine Mammal Monitoring Plan was developed and submitted to the C-NLOPB on October 7, 2019. This plan was developed 30 days prior to any potential VSP surveys. The C-NLOPB's comments were addressed to its satisfaction and included:

					- Confirm # marine mammal observers onboard - Confirm deployment location of crane (rig or vessel) - Revisions to Sections 2.0, 3.0, 3.1, 5.2.1, 5.2.2, 8.2 The C-NLOPB sent the MMMP to DFO for comments on October 11, 2019. DFO's comments were addressed and included: - Include list of marine mammal and sea turtle species - Include a QA/QC section - Revisions to Sections 3.1, 4.0, 4.1, 4.2, 5.2.2, 8.2
4	3.12.2	For the first well in each exploration licence, and for any well where drilling is undertaken in an area determined by coral and sponge surveys to be sensitive benthic habitat, and for any well located within a special area designated as such due to the presence of sensitive coral and sponge species, or a location near a special area where drill cuttings dispersion modelling predicts that drill cuttings deposition may have adverse effects, develop and implement, in consultation with Fisheries and Oceans Canada and the Board, follow-up requirements to verify the accuracy of the environmental assessment and effectiveness of mitigation measures as they pertain to the effects of cuttings discharges on benthic habitat. Follow-up shall include: 3.12.2.1 measurement of sediment deposition extent and thickness post drilling to verify the drill waste deposition modeling predictions; 3.12.2.2 benthic fauna surveys to verify the effectiveness of mitigation measures; and 3.12.2.3 The Proponent shall report the information collected, as identified in conditions 3.12.2.1 and 3.12.2.2, including a comparison of modelling results to in situ results, to the Board within 60 days following the drilling of the first well in each exploration licence; and	Ongoing	C-NLOPB, DFO	The benthic and drill cuttings monitoring plan was submitted to the C-NLOPB for review Nov 1 2019. C-NLOPB comments were received Nov 14 2019. Revisions to sections: - Section 1.0 - Program title and description revised per 3.12 of the Decision Statement -C-NLOPB submitted plan to DFO Dec 2019 Received DFO comments Jan 2020: - Sections 4.1,4.2 - Revised relevent modelling results and sampling overlay - Section 5.2 - Revised full coverage text within 200 m x 200 m grid. - Revised text for clarity on core location and collection. - Revised "Condition Indices" to included potential for smothering - Submitted revised plan Feb 2020 Submitted as final March 2020 Received approval March 2020

5	3.12.3	For the first well in each exploration licence, develop and implement, in consultation with Fisheries and Oceans Canada and the Board, follow-up requirements to verify the accuracy of the environmental assessment as it pertains to underwater noise levels. As part of the development of these follow-up requirements, the Proponent shall determine how underwater noise levels shall be monitored through field measurement by the Proponent during the drilling program and shall provide that information to the Board prior to the start of the drilling program.	31-Jul-19	C-NLOPB, DFO	Sent draft plan of the proposed Acoustic Monitoring - Follow-up Plan
			13-Aug-19	DFO	Comments received back on the plan: Incorporated the comments into the plan as relevant. Incorporated the comments into the plan which included updates to the following sections: - Section 1.1 - Section 2.2 - Section 2.4 - General comments
			14-Aug-19	C-NLOPB	Comments received back on the plan. Incorporated the comments into the plan which included updates to the following sections: - Section 1.1 - Section 2.2 - General comments - no information within plan on how condition 2.4.3 and 2.4.4 is being met.
			13-Aug-19 to 15-Aug-19	DFO	Meeting with DFO to discuss the current follow-up program and receive feedback on proposed monitoring and mitigations. Incorporated the comments into the plan which included updates to the following sections: - Section 1.1 - Section 2.2 - Section 2.4 - General comments
			28-Aug-19	C-NLOPB, DFO	Additional comments received back on the plan. Incorporated the comments into the plan which included updates to the following sections: - Section 3.0
6	4.3	The Proponent shall develop, prior to the start of the drilling program and in consultation with Environment and Climate Change Canada, and the Board, follow-up requirements, pursuant to condition 2.4, to verify the accuracy of the environmental assessment as it pertains	1-Apr-19	ECCC-CWS	EMCL initiated contact with ECCC-CWS to determine the process for capturing and handling of stranded migratory birds.
			17-Apr-19	ECCC-CWS	ECCC-CWS provided the permit application as needed.

		to migratory birds and to determine the effectiveness of the mitigation measures implemented by the Proponent to avoid harm to migratory birds, their eggs and nests, including the mitigation measures used to comply with conditions 4.1 to 4.3. The Proponent shall implement these follow-up requirements for the duration of the drilling program.	3-May-19	ECCC-CWS	A CWS Scientific Permit was issued to EMCL.
			12-Aug-19	C-NLOPB	Sent draft plan of the proposed Migratory Birds - Follow-up Plan.
			14-Aug-19	C-NLOPB	Comments on the Migratory Birds - Follow-up Plan received. Incorporated the comments into the plan which included updates to the following sections: - General comments - Section 4.0 - Section 5.0 and Section 5.1 - Section 6 - Miscellaneous items
			20-Aug-19	ECCC-CWS	Sent draft plan of the proposed Migratory Birds - Follow-up Plan.
			4-Sep-19	C-NLOPB	Comments on the Migratory Birds - Follow-up Plan received. Incorporated the comments into the plan which included updates to the following sections: - General comments in section 4.0, 5.0 and 6.3 - Section 7 - removed summary table as all info was more accurately described above.
			4-Sep-19	ECCC-CWS	Comments on the Migratory Birds - Follow-up Plan received. Incorporated the comments into the plan which include updates to the following sections: - Section 6.4 Reporting - Section 6 - overall plan organization and monitoring requirements - Section 7 removal of table above addresses confusion regarding table - Updating references - Inserted revised bird permit (addresses vessel addition)
7	5.1	The Proponent shall develop and implement a Fisheries Communication Plan in consultation with the Board, Indigenous groups and commercial fishers. The Proponent shall develop the Fisheries Communication Plan prior to drilling and implement it for the duration of the drilling program.	16-Apr-19 to 23-Apr-19	Indigenous groups (41 groups)	Emailed draft Indigenous Fisheries Communication Plan for review and comment
			17-Apr-19	C-NLOPB, CEAA	Emailed draft Indigenous Fisheries Communication Plan for review and comment (Agency for information only)
			23-Apr-19 to 4-Jun-19	Indigenous groups (41 groups), C-	Feedback provided to EMCL from Indigenous groups and C-NLOPB on draft plan.

		*EMCL prepared and submitted two separate plans to meet this commitment: an Indigenous Fisheries Communication Plan and a Fisheries Communication Plan.		NLOPB	
			7-Jun-19	Indigenous groups (41), C-NLOPB, CEAA	Provided Indigenous Feedback Report on draft plan.
			28-Jun-19	Indigenous groups (41 groups), C-NLOPB, CEAA	Incorporated feedback into plan as relevant: Provided final Indigenous Fisheries Communication Plan to the groups. Incorporated comments into the plan which included updates to the following sections: - Section 1: timing, frequency, content - Section 2: added (ref. to Condition 2.8) - Section 3: added (ESRF reporting) - Section 4: added (one point of contact) - Emergency Communication: revised
			9-Aug-19	C-NLOPB, DFO	Sent draft plan of the proposed Fisheries Communication Plan
			13-Aug-19	FFAW, One Ocean	Sent draft plan of the proposed Fisheries Communication Plan
			14-Aug-19	One Ocean	Comments received back from One Ocean on the plan: Incorporated the comments into the plan. Incorporated the comments into the plan which included updates to the following sections: - Section 4.0 - Section 5.2 - Section 6.0 - Section 7.0 - Table 1.0
			15-Aug-19	Commercial Fisheries groups (OCI, AGC, ASP)	Sent draft plan of the proposed Fisheries Communication Plan

			27-Aug-19	FFAW	Comments received back from FFAW on the plan. Incorporated the comments into the plan which included updates to the following sections: - Section 6.0 - Section 7.0
8	6.2	The Proponent shall develop, in consultation with the Board and Environment and Climate Change Canada, and implement for the duration of the drilling program, a physical environment monitoring program, in accordance with the Newfoundland Offshore Petroleum Drilling and Production Regulations that meets or exceeds the requirements of the Offshore Physical Environmental Guidelines (September 2008). The physical environment monitoring program shall be submitted to the Board for approval prior to commencing drilling.	2-Dec-18	C-NLOPB, ECCC	Details on the physical monitoring program are included in the EMCL Environmental Protection Plan and the Collision Avoidance Plan which was submitted to the C-NLOPB as part of the Operations Authorization.
9	6.6	After considering the views of Indigenous groups, the Proponent shall prepare and submit a Spill Response Plan to the Board for acceptance prior to drilling.	2-Dec-18	C-NLOPB	The OSRP was submitted to the C-NLOPB part of the Operations Authorization.
			7-Aug-19	C-NLOPB	The OSRP was revised to include an updated consultation section within the plan that outlines how the views of Indigenous groups were considered and re-submitted.
			Sept 2017, April 2018, Oct 2018	Indigenous Groups	EMCL met with Indigenous groups to focus specifically on issues related to emergency preparedness and response during a series of workshops.
10	IR-41-2	Develop the compensation program in consultation with Indigenous groups with communal-commercial licenses that overlap with the Project Area prior to commencing the first exploration drilling program.	09-Aug-19	Indigenous groups (14 groups)	Sent draft Fisheries Compensation Program to 14 Indigenous groups that currently hold commercial communal licence that overlap with the proposed project areas for exploration drilling.
			13-Aug-19	Sipekne'katik First Nation	Indicated they were unable to respond to request at this time.
			21-Aug-19	Qalipu Fist Nation	Received email correspondence back acknowledging review of the plan, but with no specific comments.
			30-Aug-19	Mi'gmawe'l Tplu'taqnn Incorporated	Provided comments regarding if compensation will be considered: - Given lack of information on

				(MTI)	presence of Atlantic salmon and other species of importance; - For spiritual and cultural loss.
			September 3, 2019	Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO)	Received a letter outlining the Assembly of Nova Scotia Chief's concerns: - Impediments to access require compensation - Section 1.1 should refer to Indigenous fisheries, in addition to commercial fish harvesters and processors. - Eligibility requirements to make claims should not be limited to licensed or registered commercial fish harvesters and processors. A rights-based fishery does not require a fishing licence.

4.5 Other Stakeholder Engagement and Research

Engagement in case of Material Changes to Project: Conditions 2.9 – 2.12 of the Decision Statement required that EMCL notify and/or consult with Indigenous groups on any material changes to the Project that may have adverse environmental effects. No material changes to the Project with potential for adverse environmental effects occurred during this exploration program.

Atlantic Salmon Research and Engagement: Per Condition 3.13 of the Decision Statement, a letter was sent to the C-NLOPB on August 9, 2019 regarding EMCLs intent to participate in, and current status of, Atlantic salmon research being conducted through the Environmental Studies Research Fund (ESRF). EMCL provided the C-NLOPB with a diagram of current metre mooring configuration including location of Vemco fish tag receivers. As part of this condition EMCL is also required to update Indigenous groups on salmon research annually. During the week of September 23, 2019 updates on the ESRF salmon research program were provided to Indigenous groups as part of stakeholder workshop sessions held between industry and Indigenous groups.

ExxonMobil Canada Ltd.also participated in joint initiatives with Indigenous groups during the lead up to, and during the operation of its exploration drilling program. These initiatives were outside of the federal environmental assessment process. EMCL attended Miawpukek First Nation's annual powwows in 2018 and 2019; a series of Indigenous Safety Training sessions (delivered by an Indigenous company in 2018 and 2020); and, participated in an all-day Indigenous Procurement Workshop (March 2020) to encourage increased participation of Indigenous people and companies in the oil and gas industry. EMCL also supported an industry-wide proposal to the ESRF to undertake a series of Atlantic-wide Indigenous Knowledge Studes – this initiative is still in development.

5 FISH AND FISH HABITAT

5.1 Pre-Drilling & Post Drilling Surveys

In preparation for regulatory approval for drilling at EL 1165A, a pre-drilling survey was completed by RPS Energy Canada Ltd. to evaluate the presence and distribution of corals and sponges. The pre-drilling survey examined a 200 m by 200 m boundary around the proposed drill center and transects within the predicted drill cutting footprint (RPS 2018). A survey plan was developed, in consultation with the C-NLOPB and DFO, prior to the start of the survey. Water depths exceeded 1100 M therefore the MODU maintained position using a dynamic positioning system. Anchors were not used at this site and were thus not included in the survey design. The objectives of the pre-survey was to monitor the existing environment at the wellsite for fish and fish habitat and implement mitigations in the C-NLOPB's guidance for coral

colonies. The C-NLOPB guidance indicates that drilling activities shall not occur within 100 m of a coral colony as defined by C-NLOPB as either:

- *Lophelia pertusa* reef complex; or
- *Five or more large corals (larger than 30 centimeters in height or width) within a 100 square metre area*

The objective of the post-drilling follow-up program was to meet conditions 3.12.1, 3.12.2, 3.12.2.1, 3.12.2.2, and 3.12.2.3 of the Decision Statement by verifying the accuracy of the predictions made during the environmental assessment as it pertains to marine fish and fish habitat and determine the effectiveness of the mitigation measures (CEA Agency, 2019). In consultation with the C-NLOPB, due to the reduced drilling program (e.g., shortened drilling time, less cuttings, only WBM used), only the 200 x 200 m area was surveyed and assessed during the post-survey.

5.2 Coral and Sponge Survey

5.2.1 Corals

A total of 4, 360 individual corals were observed in the post-drilling survey. A total of 8,795 individual corals were observed in the pre-drilling survey. The decrease in observations between the two surveys is considered to be due to the differences in field of view and transect spacing, not a project-related effect.

Sea pens were the most abundant functional group consisting of several species (e.g., Anthoptilum grandiflorum, Halipteris finmarchica, Pennatula sp.). They were observed at densities between 0 to 0.917 ind./m^2, with the highest densities occurring in the outer transect sections (particularly towards the north and south of drill center) and with decreasing densities towards the center of the survey area. While, this functional group was observed within 50 m of the drill center, there were eight transect sections that had no recorded observations. These sections were mainly to the east of the drill center. In 2018, the density distribution of sea pens was comparatively more even with most densities ranging between 0.034 to 0.298 ind./m^2, with the highest density (0.337 ind./m^2) observed to the northeast of the drill center. The means between the two surveys are comparable with 0.142 ind./m^2 observed in the pre-drilling survey and 0.165 ind./m^2 observed in the post-drilling survey.

Soft corals were the second most abundant functional group (mainly Nephtheids). Densities observed in the post-drilling survey ranged between 0 to 0.571 ind./m^2. Soft coral density increased with increasing distance from the drill center with the highest densities occurring to the east. The lowest densities were observed within 50 m of the drill center. Soft coral densities from the pre-drilling survey ranged between 0.007 to 0.417 ind./m^2. The distribution pattern was similar to the post-drilling survey where the highest densities occurred at the edges of the survey area to the east.

The two soft coral clusters identified in the pre-drilling survey occurred at two locations, one to the northwest more than 50 m from the drill center and one to the southwest more than 100 m from the drill center. From the post-drilling survey results these areas had similar densities as observed in the pre-drilling survey. Branching corals consisted of a single species (Acanella arbuscula) with the highest densities occurring to the south of the drill center. As observed in other groups, branching corals occurrence within 50 m from the drill center were lower than in sections > 50 m from the drill center. Densities in the post-drilling survey ranged between 0 to 0.061 ind./m^2, whereas they ranged from 0 to 0.033 ind./m^2 in the pre-drilling survey.

In addition to density and distribution, coral condition was also noted. In both surveys, the overall condition for corals were in good (86% of corals observed in the 2020 survey and 98% in 2018), which is described as in an upright position with polyps extended and no visible sedimentation. Due to variations in coordinates, it can be difficult to identify the same coral on the seafloor between surveys. From the pre-drilling survey, the coral clusters identified in the pre-drilling survey report occurred in transect sections consisting of >98% good condition. These areas in the post-drilling survey were in areas that ranged between 68 to 100% good condition and well outside of areas without any coral occurrences or 0% good condition. In the post-drilling survey, some sea pens were observed tilted towards the seabed; however, this does not provide evidence as to the condition of those corals only that they were not upright. Other conditions noted include polyps contracted (withdrawn) or missing, and some individuals had partial sediment coverage. Of the corals observed, 38 corals (mainly soft corals) appeared to have their polyps contracted. These corals were located mainly to the south of the drill center. Withdrawn corals were observed in both the pre- and post-drilling surveys although at a higher occurrence in the pre-drilling survey. This trend was also observed in corals with polyps missing or that appeared dead.

5.2.2 Sponges

Sponges were observed throughout the survey area. All six sponge morphological groups were observed at least once during the survey. The most observed sponge morphological groups were solid/massive, round with projections, and leaf/vase shaped. Solid/massive sponges ranged in densities from 0 to 1.176 ind./m^2 with the highest densities occurring mainly to the north and south of the drill center. Observed densities in the pre-drilling survey ranged between 0 to 1.176 ind./m^2 and were comparatively more evenly distributed throughout the survey area with the highest densities occurring to the north and south of the drill center. Leaf/vase shaped sponge density ranges were similar in both the pre- and post-drilling surveys however the distribution varied between surveys. In the pre-drilling survey, the highest densities occurred to the north of the drill center. In the post-drilling survey, the highest densities occurred to the south of the drill center with decreasing densities moving from north to south across the survey area. As in the pre-drilling survey, several large individual leaf/vase shaped sponges were observed. This was also observed between surveys for the morphological group round with projections. Similarly, in the post-drilling survey sections within 50 m of the drill center have lower reported densities than transect sections to the south of the drill center. In the pre-drilling survey sections within 50 m from the drill center 0.004 to 0.288 ind./m^2. Thin-walled, complex and stalked sponge groups were less abundant in the area for both surveys and sparsely distributed. As with the coral functional groups, the sponge morphological group densities decreased within 50 m from the drill center compared to the 2018 pre-drilling survey.

Sponge condition was assessed visually for both pre- and post-drilling surveys. In both the pre- and post-drilling surveys, most of the sponges observed had a sediment veneer on their surface. Of the sponges observed in the post-drilling survey, 85% had a sediment veneer or were covered compared to 74% in the pre-drilling survey. There were more sections with 100% sediment veneer absent observed in the post-drilling survey compared to the pre-drilling survey. This could be due to natural variation in sedimentation rates and bottom currents between the two surveys. In the post-drilling survey only three sponges (mainly leaf/vase shaped) had drill cutting accumulations obscuring their base. Sediment veneers can occur naturally and do not necessarily indicate drill cuttings or impact the overall health of a sponge

5.2.3 Invertebrates

Invertebrate taxa (other than corals and sponges) were observed throughout the grid lines though generally not present within 50 m of the drill center. Echinoderms were the most commonly observed invertebrate group (0 to 0.396 ind./m^2) of which mobile taxa such as sea urchins were the most abundant, followed by sea stars and brittle stars. Pre-drilling survey echinoderm densities ranged between 0.027 to 0.27 ind./m^2 and were observed throughout the survey area. Cnidarians (other than corals) were the second most common group (0 to 0.284 ind./m^2), with sea anemones (mainly cerianthids) as the most abundant taxa. Brachiopods were the third most common group and were sporadically distributed on hard substrates and only visible when the ROV stopped. Molluscs were comprised of mobile taxa, such as gastropods and squid, and were observed in low densities (0 to 0.061 ind./m^2). Other invertebrate taxa observed included shrimp and annelid worms. These taxa were found throughout the survey area including within 50 m of the drill center.

5.2.4 Fish

Fish species were found throughout the 200 x 200 m survey grid. Benthivores were the most commonly observed group in both surveys, with grenadier species as the most abundant taxa. Fish unable to be assigned to a functional group, such as poorly seen fish or small juveniles, were classified as Unknown fish and were the second most common group overall. Planktivores, of which lanternfish were the only taxa, were the third most common group. Low numbers of piscivores such as Greenland halibut and black dogfish sharks were observed.

5.3 Drill Cuttings Monitoring

5.3.1 Synthetic-Based Fluid on Cuttings

Seawater and viscosified brine were used while drilling the top hole portion of the well. SBM was not used during the drilling program and therefore Condition 3.12.1 is not applicable for this follow-up report.

5.3.2 Drill Cuttings Modeling

A combined drill cutting model of four seasonal models was used to predict the extent of released water-based muds (WBM) and synthetic-based muds (SBM) (Wood 2018). From the combined model, it was predicted that discharged cuttings would drift primarily to the south and southeast of the drill center. The majority of cuttings were predicted to be deposited within 1 km of the wellhead. A reduced drilling program occurred between April and May 2020 where only a top hole was drilled. Two drilling muds are typically used at separate points during the drilling process.

5.3.3 Findings

While the pre-drilling survey included both a 200 x 200 m gridbox around the drill center and transects within the proposed drill cutting footprint, only observations from the 200 x 200 m gridbox will be described for comparison to the post-drilling survey. Surficial substrate within the 200 x 200 m gridbox was pre-dominantly undisturbed fine substrate types (93%) with sporadic coarse (4.1%) and medium (2.83%) substrate (Wood 2020).

During the post-drilling survey, cuttings were visibly distinct from seafloor sediments in color, texture, and particle size. Two types of drill cuttings were observed within the survey area, pile cuttings and fine-grained cuttings. The pile cuttings consisted of loosely condensed white clumps. These cuttings were easily disturbed by the ROV and the clumps remained intact as they rolled across the seafloor. Fine-grained drill cuttings were dense and did not easily disperse in the water column. When touched by the ruler, the cuttings had a dense viscous consistency that stayed close to the seafloor). Drill cuttings were observed in three types of distributions:

- Patchy distribution was defined as occasional observations of drill cuttings <2m^2 in extent and >2 m apart,
- Dis-continuous distribution is where drill cuttings occurred either occurred more frequently and/or in patches >2 m2 in size and/or less than <2 m apart,
- Continuous distribution is where drill cuttings are continuous, in a drill cuttings pile, or patches are <1 m apart.

There was a concentration of drill cuttings <50 m radius around the well head with cuttings > 50 m were mostly observed to the south and southeast of the drill center, a direction consistent with predictions from the drill cuttings dispersion model.

A total of 105 measurements were taken during the 2020 survey. As the physical measurements involved the depth of penetration of a ruler into the seafloor (e.g., depth of refusal) which only occurred post-drilling, measurements include and could not distinguish drill cutting accumulations and natural sediment deposition. However, several observations can be made about the drill cutting accumulations. When physical measurements were taken in visibly distinct drill cutting accumulations, the sediment appeared to be less compacted than native seafloor allowing the ROV to push the ruler more easily into the seafloor

5.4 Summary and Conclusions

Based on the results from the pre- and post-surveys, some general conclusions can be drawn related to the Conditions 3.12.1, 3.12.2.2, and 3.12.2.3 of the Decision Statement. The specific conditions and the determination are provided below.

Condition 3.12.1 – for every well, measure the concentration of synthetic-based drilling fluids retained on discharged drilling cuttings as described in the Offshore Waste Treatment Guidelines (OWTG) to verify that the discharge meets the minimum limits set out in the Guidelines (and any applicable legislative requirements) and report the results to the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB);

- As detailed in Section 5.3.1, the modified drilling program's lack of SBM use means this condition is no longer applicable.

Condition 3.12.2.1 - Measurement of sediment deposition extent and thickness post drilling to verify the drill waste deposition modeling predictions;

- Due to the limited drilling program (only top hole drilled), the post-drilling survey was focused within the 200 by 200 m gridbox. The deposition model predicted drill cutting accumulations of >6.5 mm at distances > 50 m from the drill center. Post-drilling sediment deposition and thickness were determined through both visual assessments and depth penetration measurements. Based on these combined methods, the greatest depositions of drill cuttings formed a mound around the wellhead with accumulations of approximately 300 cm thickness (based on comparisons with infrastructure). Drill cutting accumulations > 50 m from the drill center were mainly patchy in distribution Overall, the observed drill cuttings deposition within a 30 m radius from the wellhead were greater in thickness relative to model predictions.
- The EA predictions indicated that the physical and chemical effects of drill cuttings was anticipated to have localized habitat disturbances less than two km from the well site. As the primary mechanism for environmental effects on benthic organisms is burial and smothering (EMCL 2017) and visible drill cuttings deposition was

limited to within 100 m of the wellhead, the potential effects are within what was assessed for the Eastern Newfoundland Offshore Exploration Drilling Program.

Condition 3.12.2.2 - Benthic fauna surveys to verify the effectiveness of mitigation measures;

- Mitigations implemented to reduce the potential harm from drilling activities to deep-sea corals included identifying coral clusters which was completed in 2018 (RPS 2018, EMCL 2019b). Other mitigations include assessing the presence and condition of corals within the survey area post-drilling and assess whether these results change the conclusion of the original environmental assessment. Post-drilling surveys were completed in 2020 and compared to observations made in the pre-drilling survey in 2018. Densities decreases of corals and sponges (i.e., more sessile species) compared to those observed in 2018, were mainly limited to within 50 m of the drill center. In transects with corals present, their overall condition was considered good (e.g., upright, polyps extended, and without visible sedimentation) for both the 2018 and 2020 observations. Sponge condition was characterized by the presence or absence of a sediment veneer (or covered). In 2020, there was an increase of sponges observed with a veneer, however over 70% of sponges in both surveys (2018 and 2020) had sediment veneers which is indicative of natural sedimentation rates. With the similarity in coral and sponge densities and distributions in the pre- and post- drilling surveys and the overall coral condition being good in both surveys (2018 and 2020), it is therefore concluded that the drilling activities observed were within the EIS predictions of the project not resulting in significant adverse environmental effects.

Condition 3.12.2.3 – Report the information collected as identified in conditions 3.12.2.1 and 3.12.2.2, including a comparison of modelling results to in situ results, to the C-NLOPB within 60 days following the drilling of the first well in each exploration licence.

- The pre-drilling survey results were compared to in situ post-drilling survey results and found that effects to corals and sponges from drilling activities were limited to within 50 m of the drill center. A separate report, titled “EL 1165a Drilling Discharges Follow-Up Program: Benthic Habitat Monitoring 2020 Report” was submitted to the C-NLOPB within 60 days upon completion of the well.

  As per the conditions 3.12.1, 3.12.2.1, and 3.12.2.3 model results were compared to in situ results and found that cuttings were within the extent of the model’s predictions and typically closer to the wellhead than what was originally predicted, visual survey and other measurements (depth penetration and chemistry) give no indication that the drill cuttings do not go further than what was predicted by the model.

5.5 Discharges

The Environmental Compliance Monitoring Plan (ECMP) was submitted as a part of the the EMCL OA application and was approved by the C-NLOPB as a part of the OA application approval. The plan identified the waste streams and sampling, analysis and reporting requirements for regulated waste streams that were discharged during routine operation. The requirements outlined in the plan were aligned with the Offshore Waste Treatment Guidelines (OWTG) as set out by the National Energy Board (NEB), the C-NLOPB and the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB).

Drilling Discharges

The ECMP outlined the monitoring and discharge requirements for drilling related discharges. It identified the effluents and activity that required compliance monitoring and those that did not. Discharges included:

- Drilling solids
- Drains system
- NAF Cuttings
- Bilge Water
- Enviro-unit Treatment

Synthetic Based Drilling Muds

WBM was used while drilling the top hole portion of the well, SBM was not used during the drilling program and Condition 3.12.1 is not applicable for this follow-up report.

Chemical Selection

During the exploration program, all chemicals onboard the MODU were managed through Seadrill's chemical management system. However, prior to initial receipt of the chemical onboard it was reviewed by EMCL as a part of the EMCL chemical screening process. This process included an environmental review to ensure the chemical met the requirements for use in a Canadian jurisdiction. The following are the environmental requirements used in the screening:

- Domestic Substance List
    - To ensure that the components in the proposed chemical were listed on the Canadian Environmental Protection Act (CEPA) domestic substance list.
- Consideration for potential air and water emissions and eventual disposal at sea
- Screening through the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) process
    - Followed when there was a potential for a substance to be release to sea and is aligned with the C-NLOPB Chemical Selection Guidelines
- Provisions for spill clean-up

Suppy Vessel Discharge

All supply vessels operating for EMCL were required to follow the requirements outlined in the International Convention for the Prevention of Pollution from Ships (MARPOL). Their adherence to MARPOL requirements was captured within the vessels Safety Management System (SMS) and various procedures. Also, all discharges from the vessels, either through the Oily Water Separator (OWS) or reception facilities, were tracked in the vessels Oil Record Book and Garbage Record Book. Prior to awarding a contract EMCL reviews the vessel operators SMS as part of the contractor screening process to ensure it meets EMCL requirements and it contains the required components. In addition to the initial screening, prior to awarding the contract, EMCL initiated an Offshore Vessel Inspection Database (OVID) inspection on the three vessels used for the exploration program. As a part of this, MARPOL requirements were reviewed to ensure the vessels were in compliance. There were no non-conformities identified during these inspections.

5.6 Underwater Sound Monitoring

As outlined in condition 3.12.3 of the Decision Statement, an acoustic monitoring program was conducted to further measure baseline sound levels, marine mammal presence and changes to the baseline resulting from the Hampden drilling program. During consultation with DFO it was decided that the acoustic monitoring program would be most effective and provide more valuable information on potential regional impacts if the receivers were deployed to allow simultaneous collection of data from both planned exploration well locations. Four bottom-mounted acoustic recorders were deployed from mid-August 2019 until May 2020. A recorder was deployed 2 km from each of the proposed well sites (Hampden and Harp), and therefore 58 km from the other site. A third recorder is at the midpoint between the two well sites). The fourth recorder was deployed at the previously established ESRF Station 19 and served as a reference location to repeat the ESRF soundscape measurements. In addition to utilizing the ESRF location for background, receivers were positioned such that each well location acted as background location for the other during drilling operations. This combination of recording locations allowed determination of how sound levels and marine mammal presence vary with distance to the drilling operations.

Acoustic data was collected on a duty cycle of 8 minutes sampling at 32 kHz, 1 minute at 512 kHz, and 11 minutes of sleep (a recording configuration similar to the configuration for the ESRF program). Data was recorded on JASCO's Autonomous Multichannel Acoustic Recorders (AMAR) and a GeoSpectrum M36 hydrophone. The combined response of the M36 and AMAR returned all the data necessary to perform a complete analysis of all radiated sound from the drilling activity as well as allowing detection of all types of marine mammal vocalizations. The proposed duty cycle allowed for a full drilling program of recording and allowed for an accurate estimation of the daily sound exposure level (SEL) (Martin et al. 2019).

The recorders were calibrated to verify the sensitivity of each system as a whole (i.e., the hydrophone, pre-amplifier, and AMAR) in JASCO's warehouse, prior to deployment, and after retrieval in the field. The calibrations performed prior to the field deployment were verified for consistency (i.e., <0.5 dB difference) with the warehouse measurements before the data analysis was performed. The post-retrieval calibration allowed us to ensure no loss of sensitivity occurred during the deployment.

5.6.1 Findings

There were no exceedances of the threshold for permanent threshold shifts. The threshold for temporary hearing threshold shifts in low-frequency cetaceans (baleen whales) were exceeded on 159 days at Harp, while the high frequency cetacean Temporary Threshold Shift (TTS) was exceeded on 86 days. The high frequency cetacean TTS threshold was exceeded on two days at Hampden. An animal would need to have remained at close radius for an entire day to accumulate sufficient sound exposure to illicit a temporary hearing threshold shift. Rather than incurring an actual threshold shift, animals are expected to avoid the area around the MODU.These exceedances are not un-expected as predictions made for a similar MODU and supply vessel configuration in similar water depth to those encountered at Hampden were compariable. A separate report presenting all findings related to the exploration acoustic monitoring program was submitted to the C-NLOPB (Jasoc Applied Sciences, 2020),

6 MARINE MAMMALS AND SEA TURTLES

EMCL developed a Marine Mammal Monitoring Plan to address Section 54 of the *Canadian Environmental Assessment Act, 2012*. Section 54 requires a marine mammals and sea turtle monitoring plan to be submitted prior to commencing any VSP operations. The objective of the plan was to minimize any risk to marine mammals and sea turtles as a result of exposure to air gun pulses during VSP activity.

The predrill geological/geotechnical assessment of the Hampden prospect identified anomalies which were drilling targets for potential hydrocarbons zones. These target zones were not encountered in the top hole at Hampden and therefore no VSP was required as part of the scope of work that was executed to date.

In addition to requirements for monitoring during VSP activities, the Marine Mammal Monitoring Plan also addressed the requirements for reporting injured, dead or stranded species. During the exploration campaign there were no sightings of injured, dead or stranded species.

7 MIGRATORY BIRDS

Chapter 6 of the Eastern Newfoundland Offshore Exploration Drilling Project Environmental Impact Statement (EIS) assessed the potential effects to marine and migratory birds within the project area and predicted that the project was not likely to result in significant adverse environmental effects on marine and migratory birds, including Species at Risk (SAR); this conclusion was determined with a moderate to high level of certainty based on current understanding of the effects of similar projects on marine and migratory birds.

To comply with the mitigation measures described in the Decision Statement, monitoring measures were implemented in order to reduce potential environmental effects as they pertain to migratory birds. These consisted of daily surveys of the MODU by a trained individual to determine the presence of stranded birds, with checks being logged and any encounter of a stranded bird, live or dead, documented on a Stranded Bird Encounter datasheet. This datasheet was sent weekly to the onshore Environmental Advisor. At the conclusion of the Project, it was submitted to the C-NLOPB and posted to the exploration website. As required by seabird handling permit SC4039 all original data was submitted to the Canadian Wildlife Services within the specified reporting timelines. Daily seabird monitoring during the Hampden (EL 1165A) exploration program was limited to stranded seabird searches and did not include daily live bird monitoring.

Although no specific follow-up related to the marine and migratory birds was considered necessary in relation to this project, in addition to the implementation of the various mitigation measures outlined in the EIS, a monitoring and observation program was developed by EMCL, primarily to fulfill Condition 4.3 and verify the accuracy of EIS effects predictions. With the implementation of the various mitigation measures outlined in the EIS, the impact to marine and migratory birds was avoided or reduced, and no population-level effects were observed during the duration of the drilling program.

Section 4.2 of the Decision Statement described mitigation measures necessary to reduce the potential impact of well testing and flaring operations on marine and migratory birds. Because there were no flaring operations during the drilling program, these mitigation measures were not necessary.

A report, titled Seabird Monitoring Results, detailing the results of the daily stranded bird surveys can be found at the following domain: *https://exploration.exxonmobilcanada.ca/.*

8 ADDITIONAL MITIGATIONS

8.1 Emergency/Spill Response

The EMCL MODU Well Intervention Plan and MODU Well Control Bridging Plan, along with a relief well plan, were submitted to the C-NLOPB as part of the OA package on December 2, 2018. These documents, in conjunction with Seadrill documents, include strategies for maintaining well control on the MODU, disconnect strategies in the event of weather or an emergency, as well as details on how a relief well would be drilled in the unlikely event a loss of well control is encountered.

A SIMA was conducted by EMCL as part of the contingency planning process for exploratory drilling in the Flemish Pass. The SIMA is a tool to help evaluate scientific, policy, and stakeholder inputs to arrive at reasoned decisions as to which response tool(s) should be used under a particular set of circumstances, with the goal of minimizing overall harm once a spill has occurred. A draft SIMA was submitted to the C-NLOPB on April 30, 2019 and a meeting was held with the C-NLOPB and the National Environmental Emergencies Centre's Environmental Emergencies Science Table (the "Science Table") to review, with participants including representatives from Fisheries and Oceans Canada, Environment and Climate Change Canada, Canadian Wildlife Service, Canadian Coast Guard, Transport Canada, and Natural Resources Canada. The final SIMA was submitted to the C-NLOPB August 19, 2019 and is available on the EMCL Exploration website.

An OSRP was also included in the OA package, with an updated OSRP submitted to the C-NLOPB on August 9, 2019. Following consultation with Indigenous groups, this plan was developed to provide guidance to EMCL personnel who may be involved in the response to an oil spill during drilling operations within the Hampden prospect. EMCL recognizes that prevention is the most effective way to avoid damage to the environment due to oil spills. Thus, the MODU program has been designed to prevent the occurrence of spills through use of policies, procedures, equipment and trained personnel to reduce the probability of a spill and to minimize the consequences, should one occur. Accordingly, the OSRP was used to identify the boundary of responsibility and key interfaces for oil spill response while the MODU was on hire to EMCL. It included response measures to mitigate the effects of a spill, including spill containment and recovery, and wildlife preservation and rehabilitation procedures, as well as criteria and thresholds for reporting such events.

On July 16, 2019, a tabletop oil spill response exercise was conducted. The objectives of this exercise were to:

- Understand potential limitations with responding to spills in far reach regions
- Create plans to mitigate spread of oil in water
- Understand how to use current contractors for inside and outside 200 NM line
- Understand time lines of responding to spills.
- Identify potential areas of improvement and create actions to close

The results of this exercise and associated actions were provided to the C-NLOPB on July 31, 2019 and Indigenous groups on August 16, 2019. The Spill Response Plan was posted to the Internet with a link shared to groups the week of September 3, 2019.

Throughout the duration of drilling at EL 1165A, there were no accidents or malfunctions that required activation of the Spill Response Plan. Prior to commencement of drilling at EL 1165A a complete review of the OSRP was completed per condition 6.8.

8.2 Ice Management

An Ice Management Plan was prepared by Provincial Aerospace Limited (PAL) Aerospace Ice and Environmental Services for EMCL. The intent of the plan was to outline procedures that prevent hazardous ice from reaching the MODU and address both iceberg and sea ice. EMCL submitted an Ice Management Plan to the C-NLOPB as a part of the approved OA submission.

9 REFERENCES

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